The RECORD

THE SOCIETY OF THE NEW YORK HOSPITAL/1969

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Dr. S. Frank Redo examines Linda Smith, whose life he saved when she was an infant.

A child is given a future

"NICKLES is my very favorite pony," said eight-year-old Linda Smith. "I ride him every day, comb his shaggy hair and feed him hay. When he's extra good he gets an apple. Sometimes I let my little brother help," she said, "because we have three other ponies and a dog and two kittens. And I like to swim, too, and play house and go to school. But when I grow up I'm going to be a nurse," she confided.

"Linda can look forward to a tomorrow in which her dreams can come true," said her mother "because The New York Hospital gave to her the help she needed during her first years of life. Otherwise, our baby's life would have ended, almost before it was begun."

"Linda, our first baby was perfect in every way, or so we thought," Mrs. Smith said. "But when she was only a few weeks old Linda had difficulty in breathing and other symptoms which alarmed us."

When Linda was six weeks old her parents brought her to The New York Hospital where an examination revealed that she was born with a defective heart. The baby had not one, but two congenital heart defects, each of which endangered her life.

Linda's aorta, the main artery which arises from the left ventricle, or pumping chamber of the heart, was narrowed by an internal web-like structure. This constriction occurred at a point which prevented the lower part of her body from receiving blood at a normal pressure and forced her heart to work harder in order to propel blood throughout her body.

The infant also had a large hole in the wall of her heart that divides the left and right pumping chambers. Often one of these difficulties alone is enough to cause heart failure. Linda, whose heart was taxed by both defects, failed to respond to medical measures.

Three life-saving surgical procedures were necessary to repair Linda's heart and restore her to health. These were directed and performed by Dr. S. Frank Redo in three steps measured by the infant's age and ability to withstand surgical repairs to her heart. Dr. Redo, one of the leaders in cardiovascular surgery and research, is an Attending Surgeon at The New York Hospital and a Clinical Associate Professor of Surgery at Cornell University Medical College.

When Linda was six months old Dr. Redo removed the narrowed area in Linda's aorta. A normal supply of blood could now flow unobstructed through the big artery. The burden on her heart was lightened but her life was still menaced by her other heart defect.

Three weeks later the second step was taken in the repair of her heart. She was still too young and frail to withstand the open heart surgery which would be required to seal the hole in the wall of her heart. Yet, her lungs and pulmonary circulation had to be protected from the excessive flow and pressure of blood which they received through the defective opening. In an ingenious countermaneuver, Dr. Redo placed a plastic band around her pulmonary artery to reduce its size and decrease the flow of blood which this artery carries to the lungs.

Successful in its purpose, the emergency measure enabled Linda to grow in strength and years until the final big step could be taken to repair her heart.

When Linda was 4½ years old, Dr. Redo closed the hole in her heart with a plastic patch, and removed the band from her pulmonary artery.

Since that time Linda has received periodic check-ups in the Congenital Cardiac Clinic which is headed by Dr. Mary Allen Engle, Director of Pediatric Cardiology at The New York Hospital. Dr. Engle agrees with Dr. Redo that today Linda's future is as sunny as her smile, as vibrant as her good health.

Progress against Parkinson's Disease

A YEAR AGO William Matsuuchi carried his 67-year-old mother, Chiyo, in his arms when he brought her to The New York Hospital for treatment in the Parkinson's Disease Research Program.

Today Mrs. Matsuuchi can walk the 10 blocks from her home to the Hospital in 10 minutes. No longer does she freeze when she approaches a revolving door, a street crossing. Gone is the constant fear that she will fall. She moves with ease, arises from bed without aid. Mrs. Matsuuchi not only takes care of herself but helps to cook and market for her son's family with whom she lives. She has regained her independence.

Parkinson's disease, a chronic neurological disorder, marked by muscular rigidity and tremors, slows the gait to a shuffle, limits speech to a stammer, the facial expression to a mask. It is one of the most debilitating diseases known to man. Parkinsonism, which usually strikes in the middle years of life, is one of the major causes of chronic disability in this age group.

For Mrs. Matsuuchi, and for many other Parkinsonian patients treated at The New York Hospital, the progressive deterioration, characteristic of the disorder which had reduced her to an anxious shadow, a trembling step away from nursing home care, has been reversed. "Mother is just the opposite of what she was. It is worth a million dollars. It is that miraculous," said her daughter-in-law.

The New York Hospital has helped to open the door to hope to the victims of Parkinson's disease through a pioneer research program begun 18 months ago to test the efficacy of a new drug, L-dopa, in the treatment and study of patients with this disorder. The American Parkinson Disease Association has extended its support to the project.

The program is directed by Dr. Fletcher H. McDowell, Attending Neurologist at The New York Hospital and Professor of Neurology at Cornell University Medical College and Dr. John E. Lee, Assistant Attending Neurologist at the Hospital and Clinical Assistant Professor of Neurology at the Medical College.

Since the Parkinson's Disease Research Program began two-thirds of the 170 patients who are under continuous treatment with L-dopa at The New York Hospital are reported by Dr. McDowell to have

Dr. John E. Lee tests Mrs. Matsuuchi's balance and observes the freedom with which she walks. Her response to treatment in the Parkinson's Disease Research Program is excellent.

shown moderate to dramatic improvement. "The improvement is so striking in some cases," said Dr. McDowell, "you can no longer tell the patient has Parkinson's." The Research Program is in the Hospital's Department of Neurology headed by Dr. Fred Plum, Neurologist-in-Chief, who is also Chairman of the Department in the Medical College.

New patients cannot be accepted in the Parkinson's Disease Research Program. Dr. McDowell explained that "the number of patients in the Research Program must be limited to the group who earlier volunteered to cooperate in the controlled tests of the experimental drug, L-dopa."

L-dopa (Levodihydroxyphenylalanine) is a potent amino acid which acts to restore a brain chemical, dopamine, which is depleted in Parkinsonism. Since dopamine cannot cross the natural barrier between the blood stream and the brain and reach the deprived cells, it cannot be replaced artificially. L-dopa crosses this barrier where it is converted in the brain to dopamine. The reversal of the effects of Parkinson's disease by the use of L-dopa is believed to result from its ability to reconstitute the normal concentrations of dopamine essential to normal nerve activity in the mid brain.

Dr. McDowell, who calls L-dopa "the most hopeful drug yet discovered for the treatment of Parkinson's disease," expresses cautious optimism as to whether it will one day be judged as significant a weapon against this chronic ailment as penicillin is against infection. "It is too early yet," he explained, "to fully appraise the potentials of this experimental drug. While L-dopa has made enormous improvements in the outlook for most of our patients, it is not a cure nor can it help everybody.

"L-dopa has opened up a new and promising era of medical inquiry and therapy for patients who suffer from Parkinson's disease," said Dr. McDowell, "which we will continue to explore in the hope that it will lead to further advances against this crippling disorder."

Dr. Peter E. Stokes, left, and Laboratory Assistant Ross Henry study effects of alcohol ingestion at the Psychoendocrine Research Unit.

Warning signals of alcoholism

IT IS ESTIMATED that over five million people in the United States are alcoholics, with 200,000 new cases developing every year. A great toll in broken lives and human misery is caused by this baffling disease.

Alcoholism can attack people from all walks of life, at all ages. It does not restrict itself to people of one physical type, nor of one personality type. According to Dr. Peter E. Stokes, who is making extensive studies in the psychiatric divisions of The New York Hospital, alcoholism is an insidious disease, creeping up on its victims even before they are aware they are in danger.

What are the warning signals of alcoholism? Dr. Stokes suggests that one should be alert to the following:

1. A gradual increase in the amount of alcohol consumed;
2. An increase in the frequency of use, extending through greater portions of the day;
3. A concern or uneasiness, often mild, about social or business activities which preclude alcohol, or conversely a feeling of relief that alcohol will be

served.

4. Increasing episodes of severe intoxication. Memory lapses in connection with intoxication should be a cause for serious concern.

Dr. Stokes is Director of the Psychoendocrine Research Unit of the Payne Whitney Psychiatric Clinic, where he is a Supervising Psychiatrist, and an Associate Professor of Medicine (Endrocrinology) in Psychiatry in Cornell University Medical College. His work also takes him to the laboratories of the Westchester Division of The New York Hospital-Cornell Medical Center in White Plains, where a new unit for treatment, teaching and research into alcoholism has recently been opened.

What is an alcoholic? The disease affects people in so many different ways that precise definitions are difficult. Here is one approach:

A person is an alcoholic when his use of alcohol and his craving for the drug destroys his capacity to function in his life relationships.

A person has a drinking problem when his use of alcohol adversely affects his functioning in important aspects of his life, such as his work or his family relationships.

Alcohol, Dr. Stokes points out, is a drug, with measurable physiological and emotional effects. To some extent it is a tranquilizer, suppressing feelings of fear and insecurity. Herein lies its danger to many people. More and more alcohol must be consumed for the tranquilizing effect to be realized, until, as the hardened drinker puts it, he "feels" it. The desire snowballs as the drinker develops a psychological dependency upon the drug. More and more often, he feels he "needs" a drink. A dangerous turning point comes when he fears to be without it. The executive keeps a bottle in his desk; the housewife hides an extra in the kitchen cupboard. By such small steps, sometimes over a period of years, the moderate or social drinker may develop into a problem drinker—one whose optimum functioning is being seriously undermined by the use of alcohol.

Dr. Stokes and his colleagues are intensively seeking the answer to the question of why one person becomes an alcoholic while another does not. So far it has been impossible to es-

Skid Row derelicts comprise only about 1 per cent of the alcoholics who suffer from the disease in this country.

tablish a particular personality defect leading to alcoholism. Research is also seeking to discover if it is a physiological difference which makes one person more vulnerable to the disease than another.

A potential clue to the disorder is being explored in studies in patients in the Psychoendocrine Research Unit which Dr. Stokes heads and in his work with monkeys at the Bourne Behavioral Research Laboratory at the Westchester Division with Drs. Paul McHugh and Gerard Smith. Investigators have discovered that an ingestion of alcohol affects an area of the brain and releases certain hormones, among them one that controls the excretion of body fluids. There is also a release of ACTH from the pituitary gland, with a resulting increase in adrenal gland activity. These hormones are also found in large amounts in persons with anxiety or depression. These reactions are confirmed by blood and urine in clinical tests. One laboratory in England working along similar lines has shown that there is a large-scale hormone reaction in non-alcoholics given alcohol, whereas with alcoholics there is minimal reaction.

Perhaps it will be through the study of some such differences in reaction to alcohol between alcoholics and non-alcoholics that the means may be found to allay the craving for alcohol which has disrupted so many lives.

In the meantime, many alcoholics and potential alcoholics with drinking problems can and are being helped. At both the Payne Whitney Psychiatric Clinic and the Westchester Division of The New York Hospital-Cornell Medical Center, multiple therapies are used. After physical dependency upon the drug has been broken by withdrawal under medical supervision, the patient is given a complete change of environment. Milieu therapy, work with family relationships, and psychotherapy for the personal emotional problems that are associated with the patient's use of the false crutch of alcohol are all part of the treatment. Alcoholics Anonymous continues to help with many alcoholics. The effectiveness of anti-depressant drugs is being treated in patients where appropriate. Antabuse remains an important adjunct for some.

Equally important is the constant study of these patients, with the hope of finding ever more effective means of treatment.

There is one outstanding peculiarity about the alcohol problem. Many problem drinkers refuse to admit to themselves that they have a problem until much harm, sometimes irrevocable, has been done. No one can be helped, Dr. Stokes warns, unless he faces the problem and asks for help.

Meanwhile, the person who uses alcohol in any form should now and then assess his drinking habits to make sure that alcohol remains merely a pleasant adjunct, not a destructive factor, in his life.

Miracle operation restores sight

A GRANDMOTHER in her sixties, a young track star of 22, a 54-year-old folk singer from Israel . . . What do they have in common? They are no longer blind.

These miracles are only three of the many that take place every year in The New York Hospital. Their sight was restored by a delicate surgical procedure called a cornea graft. Because of greatly improved techniques, grafts are now successful in almost 90 per cent of the cornea operations in this Hospital.

Dr. Stuart I. Brown, Associate Attending Surgeon (Ophthalmology) and Clinical Assistant Professor of Ophthalmology in Cornell University Medical College, is Director of the Cornea Service and the Cornea Research Laboratory. The cornea of the eye, Dr. Brown explains, is a thin transparent tissue covering the iris allowing light to enter the eye. Disease may change the shape of the cornea or cause it to become opaque, leaving the victim without sight. The cornea operation consists of removing the useless tissue and substituting for it a living graft of new tissue taken from a donor or from the Eye Bank. Dr. Brown performs the operation under a local anesthetic, and the patient may leave his bed as soon as the sedation has worn off. The eyes remain bandaged for approximately a week; complete healing is attained in about two months.

Many different conditions lead to the desirability of this operation. Mrs. Katherine Lusk began losing her sight 15 years ago, as a result of cataracts and corneal edema (swelling) in both eyes. In successive operations, first one eye was treated and then the other. The cataracts were removed and new corneas transplanted. The operations were so successful that Mrs. Lusk now rides a bicycle, swims and dives in her pool.

Young Richard Berger suffered from a hereditary disease called keratoconus, in which the corneas alter their shape and become pointed. Here again, operations in which new corneal grafts were implanted in both eyes restored his sight. With glasses, Richard now has 20/20 vision. For track events, which he has resumed, he uses contact lenses.

Dr. Stuart I. Brown with Mr. Richard Berger and Mrs. Catherine Lusk, both of whom regained sight in both eyes via cornea transplant operations. In the foreground is a camera which takes three dimensional pictures of the cornea.

Mr. Shamai Rosenblum had been blind since the age of 14, due to a hereditary condition in which the cornea becomes progressively opaque. He lost one eye as a result of an operation performed on him in a concentration camp. After the war, Mr. Rosenblum moved to Israel, where he became a popular entertainer. He married and had two children.

Recently Mr. Rosenblum came to this country for a concert and was referred to The New York Hospital. He was barely able to detect the presence of light; he could not see objects. Tragically, the congenital disorder that had destroyed his sight was now attacking the eyes of his 16-year-old son. Both father and son were treated, with outstanding success.The son received two corneal grafts and sees well in both eyes. The father received a graft for his remaining eye and now has 20/20 vision with glasses.

For the first time, Mr. Rosenblum saw his wife and children. In his own words, "Life has become a carnival."

An operation which possibly holds

great significance for the future was recently performed on Mr. Alan Thompson. An engineer for IBM, Mr. Thompson was the victim of an accident in which a chemical entered one eye, making the cornea completely opaque. In addition, the condition was so painful that he could work only occasionally.

Such situations had previously been considered almost hopeless, because in this kind of injury healing is poor. However, during the past year in the Cornea Research Laboratory, Dr. Brown and his colleagues had learned that an enzyme (called collagenase) was responsible for the defective healing and inhibitors were discovered which could prevent the enzyme's destructive activity.

With this new knowledge it was decided to attempt a corneal graft for Mr. Thompson. The operation was performed and every opportunity was given for natural healing to take place, but no progress was made. At last the enzyme inhibitor was applied, with almost miraculous results. The new cornea is almost perfect and Mr. Thompson is back at his daily work. The operation was one of the rare successes in a corneal graft following such severe chemical injury.

Corneal grafts were first attempted at the turn of the century, but it was not until the 1930's that success became frequent. A decade ago, about a 50 per cent rate of success had been achieved. The present high rate of success in The New York Hospital is due to a number of factors, according to Dr. Brown. One is increasing surgical skills and such tools as surgical microscopes. New sutures have also been developed. Made of nylon, they are about one fifth the thickness of a fine human hair and can barely be perceived by the naked eye.

Graft rejection is not a serious problem in corneal transplants, as the cornea contains no blood vessels through which antigens can be carried to the site to initiate the rejection process. In addition, the transplant is clearly visible, so that if a rejection process should begin it can be immediately observed and treated.

In the event that the graft procedure fails, an artificial cornea, invented by Dr. Brown and made of transparent silicone, may be substituted. This inert material is not rejected by the body and its use actually promotes healing. However, since it does not provide as good vision as the living graft, The New York Hospital uses it only as a last resort.

Corneal grafts are only one phase of the organ transplant program at The New York Hospital. The program for kidney transplants is well advanced as are also the new frontiers of liver and heart transplants. The success of the cornea graft program gives hope that these new techniques of medicine will in due time make equally significant contributions to saving life and restoring health.

How volunteers help the hospital

"Now I have something to do after dinner," said a grateful patient at The New York Hospital, after a Volunteer Friendly Visitor had taught her to play solitaire. The patient came from Puerto Rico and could speak very little English, which made it hard for her to talk to the other patients and limited her amount of reading matter. A doctor paced his hospital room, bored with the pile of medical journals he felt he should be reading. He was persuaded to try a more frivolous magazine on airplanes to make his stay as a patient more enjoyable and relaxing. A teenage boy taught his Friendly Visitor to play chess; another asked for poetry to be read to him. Patients are escorted to a roof where they can sit in the sun and have the sights of New York City picked out for them, including a well-known actor's apartment in a nearby penthouse. An eye patient needs help with his lunch. These are a few of the incidents that make up the day of A Volunteer Friendly Visitor.

These Volunteers are discreet and friendly people who visit the patients to see what they can do to relieve the loneliness of a hospital stay and make it more agreeable and comfortable. Some of the other requests that Friendly Visitors undertake are making telephone calls or purchases from the Gift Shop, writing letters, changing library books or playing a game of cards. Sometimes a patient needs someone to tell his troubles to or simply to chat with. The Friendly Visitors arrange evening recreation for the patients who are well enough —games of Bingo or movies. They also help with recreation in the Pediatric Department.

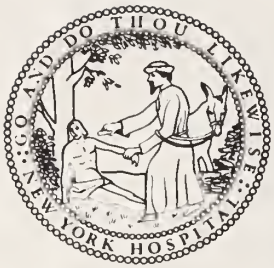
Volunteers are valuable workers in 36 areas of the Hospital and do

Volunteer Mrs. Robert B. McIntosh reads the news to a patient who has had an eye operation. Saying hello is Mrs. Homer T. Crawford, Director of the Volunteer Department.

many tasks that enable the professional worker to give more time to his duties, but in no way replace him. Some of the other areas where the Volunteers help at The New York Hospital are the Out-Patient clinics, patient floors, Emergency Unit, Admitting, Information, Social Service, Occupational and Physical Therapy, Pediatric Recreation, Patients' and Medical libraries, Pharmacy, Thrift Shop and Tours. They help doctors who are engaged in research projects. In 1968 they made 1447 dolls which were distributed to hospitalized children. They contributed an impressive total of 47,460 hours in 1968, which is the equivalent of four years and three and a half months of steady work.

Patients come from many other countries and often do not have family or friends here to visit them. They may not speak English, so Volunteers who can speak languages are especially needed, as in the case of the Emergency patient who could only speak Chinese. A Volunteer was found to interpret for the doctor.

These enthusiastic and responsible citizens are to be seen in every area of the Hospital, the women in flamingo colored smocks and the men in dark blue jackets with the insignia of the Volunteer Service. They come from every walk of life and are of all ages. Among them are business and professional men and women, such as models, air-line stewardesses, artists, bankers, manufacturers, musicians, receptionists, secretaries, stockbrokers, housewives, retired men and women such as army officers, bankers, diplomats, librarians, nurses, taxi drivers; and students. But no matter what they do in life they all have a common wish to help others and to lead useful lives.



The New York Hospital is a voluntary, non-profit institution operated as a community service by The Society of the New York Hospital.

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